

Fitchburg Gas and Electric Light Company

Pension/PBOP Adjustment Factor Calculation for 2005*

$$PAF_x = (RA_x + cc(URD_x + APPA_x - DTA_x) + PPRA_x) / FkWh_x \text{ or } FTherm_x$$

* Effective 1/1/05 for Electric, 11/1/04 for Gas

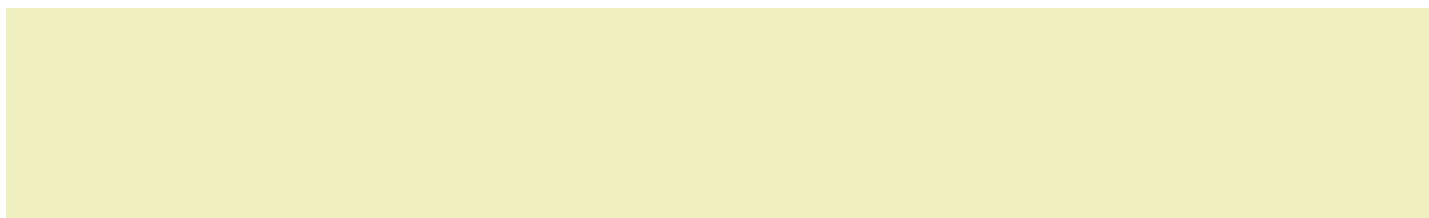
Line No.	Description	Electric	Gas	Total	Reference
A1	Gas/Electric Allocation Factor - FG&E Payroll/Labor	58.43%	41.57%	100.00%	
I. Calculation of Reconciliation Adjustment: RA_x					
1	Unamortized Reconciliation Deferral at 12/31/03 (Year-Begin)	\$ 169,388	\$ 169,913	\$ 339,302	Schedule LMB - 3, L.3
2	2004 Pension & PBOP Expense (Distribution)	1,082,777	723,268	1,806,045	Schedule LMB - 2, L.19
3	Less: Pension & PBOP Expense in Base Distribution Rates	382,522	202,272	584,794	Schedule LMB - 4, L.15
4	2004 Reconciliation Deferral	700,255	520,996	1,221,251	L.2 - L.3
5	Less: Reconciliation Adjustment for 2004	-	-	-	No RA _x in 2004
6	2004 Unamortized Reconciliation Deferral (Year-End)	869,643	690,909	1,560,552	L.1 + L.4 - L.5
7	Reconciliation Adjustment for 2005	\$ 289,881	\$ 230,303	\$ 520,184	L.6 / 3 years
II. Calculation of Carrying Charge: cc (URD_x + APPA_x - DTA_x)					
8	Cost of capital factor	11.10%	11.10%		Schedule LMB - 6, L.4
9	2004 Unamortized Reconciliation Deferral (Year-End)	\$ 869,643	\$ 690,909	\$ 1,560,552	L.6
10	Deferred Tax on Unamortized Reconciliation Deferral	330,725	262,753	593,478	L.9 * 0.3803
11	Unamortized Reconciliation Deferral Subject to Carrying Charge	\$ 538,918	\$ 428,156	\$ 967,074	L.9 - L.10
12	Carrying Charge on Unamortized Reconciliation Deferral	\$ 59,820	\$ 47,525	\$ 107,345	L.11 * L.8
13	Prepaid Pension @ 12/31/03 (FG&E)	\$ 2,284,943	\$ 1,625,622	\$ 3,910,565	D.T.E. 04-48 Exhibit LMB-4, p.1, * A1
13a	Prepaid Pension @ 12/31/03 (Unitil Service)	(345,292)	(245,658)	(590,951)	D.T.E. 04-48 Exhibit LMB-4, p.1 * 43.51% * A1
14	Prepaid Pension @ 12/31/04 (FG&E)	2,165,512	1,540,652	3,706,164	D.T.E. 04-48 Exhibit LMB-4, p.1, * A1
14a	Prepaid Pension @ 12/31/04 (Unitil Service)	(408,831)	(290,863)	(699,694)	D.T.E. 04-48 Exhibit LMB-4, p.1 * 43.51% * A1
15	2004 Average Prepaid Pension	1,848,165	1,314,877	3,163,042	(L.13 + L13a + L.14 + L14a) / 2
16	Less: Deferred Tax on Prepaid Pension	702,857	500,048	1,202,905	L.15 * 0.3803
17	Total 2004 Prepaid Pension net of Deferred Tax	\$ 1,145,308	\$ 814,829	\$ 1,960,137	L.15 - L.16
18	Less: Allocation to Electric Transmission	\$ 28,843	\$ -	\$ 28,843	L.17 (Electric) * 2001 COSS Labor Allocator
19	2004 Prepaid Pension (Distribution) Subject to Carrying Charge	\$ 1,116,465	\$ 814,829	\$ 1,931,294	L.17 - L.18
20	Prepaid (Accrued) PBOP @ 12/31/03 (FG&E)	\$ (226,729)	\$ (161,307)	\$ (388,036)	D.T.E. 04-48 Exhibit LMB-4, p.2, * A1
20a	Prepaid (Accrued) PBOP @ 12/31/03 (Unitil Service)	(122,507)	(87,158)	(209,665)	D.T.E. 04-48 Exhibit LMB-4, p.2 * 43.51% * A1
21	Prepaid (Accrued) PBOP @ 12/31/04 (FG&E)	(778,927)	(554,168)	(1,333,095)	D.T.E. 04-48 Exhibit LMB-4, p.2, * A1
21a	Prepaid (Accrued) PBOP @ 12/31/04 (Unitil Service)	(386,724)	(275,135)	(661,858)	D.T.E. 04-48 Exhibit LMB-4, p.2 * 43.51% * A1
20	2004 Average Prepaid (Accrued) PBOP	(757,444)	(538,883)	(1,296,327)	(L.18 + L18a + L.19 + L19a) / 2
21	Less: Deferred Tax on PBOP	(288,056)	(204,937)	(492,993)	L.20 * 0.3803
22	2004 Prepaid (Accrued) PBOP net Deferred Tax	\$ (469,388)	\$ (333,946)	\$ (803,334)	L.20 - L.21
23	Less: Allocation to Electric Transmission	\$ (11,821)	\$ -	\$ (11,821)	L.22 (Electric) * 2001 COSS Labor Allocator
24	2004 Prepaid (Accrued) PBOP (Distribution) Subject to Carrying Charge	\$ (457,567)	\$ (333,946)	\$ (791,513)	L.22 - L.23
25	Carrying Charge on Average Prepaid Amount	\$ 73,138	\$ 53,378	\$ 126,516	(L.19 + L.24) * L.8
26	Total Carrying Charges	\$ 132,958	\$ 100,903	\$ 233,861	L.12 + L.25
III. Past Period Reconciliation Amount: PPRA_x					
27	2004 Actual Pension/PBOP Adjustment Amount	\$ -	\$ -	\$ -	No PAF in 2004
28	Less: 2004 Actual Pension/PBOP Adjustment Revenue	-	-	-	No PAF in 2004
29	Prior Period Reconciliation Amount	\$ -	\$ -	\$ -	L.26 - L.27
30	Interest at Prime rate	-	-	-	Per 220 C.M.R. ¶ 6.08(2)
31	Past Period Reconciliation Amount	\$ -	\$ -	\$ -	L.29+ L.30
IV. Forecasted Pension Adjustment Factor:					
32	Forecasted Pension/PBOP Adjustment Amount for 2005*	\$ 422,839	\$ 331,206	\$ 754,045	L. 7 + L. 26 + L. 31
33	Forecasted kWh sales and Therm sales units	547,191,749 kiloWatt hours	26,122,700 Therms		Per Company Forecast
34	Pension/PBOP Adjustment Factor for 2005*	0.00077	0.0127		

Fitchburg Gas and Electric Light Company
Pension/PBOP Expense
2004

Line No.	Description	Electric	Gas	Total	Reference
A1	Gas/Electric Allocation Factor - FG&E Payroll/Labor	58.43%	41.57%	100.00%	
A2	USC Services Allocation	65.11%	34.89%	100.00%	
I. Calculation of Pension Expense, net of amounts chargeable to capital					
I.a FG&E Pension Expense, net:					
1	2004 FG&E Pension Expense per Actuary	\$ 358,760	\$ 255,240	\$ 614,000	D.T.E. 04-48 Exhibit LMB-4, p.3 * A1
2	Less: Amounts chargeable to capital	147,702	105,082	252,784	L.1*41.17%
3	Total FG&E Pension Expense, net	<u>\$ 211,059</u>	<u>\$ 150,158</u>	<u>\$ 361,216</u>	L.1 - L.2
I.b Unitil Service Pension Expense allocated to FG&E, net:					
4	2004 Unitil Service Pension Expense per Actuary	\$ 174,792	\$ 93,665	\$ 268,457	D.T.E. 04-48 Exhibit LMB-4,p.3*43.51%*A2
5	Less: Amounts chargeable to capital	40,744	21,833	62,577	L.4 * 23.31%
6	Total Unitil Service Pension Expense allocated to FG&E, net	<u>\$ 134,048</u>	<u>\$ 71,831</u>	<u>\$ 205,879</u>	L.4 - L.5
7	Total 2004 FG&E Pension Expense	<u>\$ 345,107</u>	<u>\$ 221,989</u>	<u>\$ 567,096</u>	L.3 + L.6
II. Calculation of PBOP Expense, net of amounts chargeable to capital					
II.a FG&E PBOP Expense, net:					
8	2004 FG&E PBOP Expense per Actuary	\$ 880,944	\$ 626,748	\$ 1,507,692	D.T.E. 04-48 Exhibit LMB-4, p.7 * A1
9	Less: Amounts chargeable to capital	362,685	258,032	620,717	L.8 * 41.17%
10	FG&E PBOP Expense, net	<u>\$ 518,260</u>	<u>\$ 368,716</u>	<u>\$ 886,975</u>	L.8 - L.9
II.b Unitil Service PBOP Expense allocated to FG&E, net:					
11	2004 Unitil Service PBOP Expense per Actuary	\$ 322,576	\$ 172,856	\$ 495,432	D.T.E. 04-48 Exhibit LMB-4,p.7*43.51%*A2
12	Less: Amounts chargeable to capital	75,192	40,293	115,485	L.11 * 23.31%
13	Unitil Service PBOP Expense Allocated to FG&E, net	<u>\$ 247,383</u>	<u>\$ 132,564</u>	<u>\$ 379,947</u>	L.11 - L.12
14	Total 2004 FG&E PBOP Expense	<u>\$ 765,643</u>	<u>\$ 501,279</u>	<u>\$ 1,266,922</u>	L.10 + L.13
III. Total 2004 PENSION/PBOP Expense, net of amounts chargeable to capital and allocation to Electric Transmission					
15	Total 2004 FG&E Pension Expense	\$ 345,107	\$ 221,989	\$ 567,096	L.7
16	Total 2004 FG&E PBOP Expense	<u>765,643</u>	<u>501,279</u>	<u>1,266,922</u>	L.14
17	Total 2004 FG&E PENSION/PBOP EXPENSE	\$ 1,110,750	\$ 723,268	\$ 1,834,018	L.15 + L.16
18	Less: Allocation to Electric Transmission	27,973	-	27,973	L.17 (Electric) * 2001 COSS Labor Allocator
19	Total 2004 FG&E PENSION/PBOP Expense (Distribution)	<u>\$ 1,082,777</u>	<u>\$ 723,268</u>	<u>\$ 1,806,045</u>	L.17 - L.18

Fitchburg Gas and Electric Light Company
Pension/PBOP Expense Unamortized Reconciliation Deferral
at 12/31/2003

<u>Line No.</u>	<u>Description</u>	<u>Electric</u>	<u>Gas</u>	<u>Total</u>	<u>Reference</u>
I. Calculation of PENSION/PBOP Expense Regulatory Asset Deferral at 12/31/2003					
1	2003 FG&E PENSION/PBOP Expense (Distribution)	\$ 551,910	\$ 372,186	\$ 924,096	Schedule LMB - 5, L.19
2	Less: PENSION/PBOP Expense in Base Distribution Rates	382,522	202,272	584,794	Schedule LMB - 4, L.15
3	PENSION/PBOP Expense Deferral for 2003	<u>\$ 169,388</u>	<u>\$ 169,913</u>	<u>\$ 339,302</u>	L.1 - L.2



Fitchburg Gas and Electric Light Company
Pension/PBOP Expense in Base Rates

Line No.	Description	Electric	Gas	Total	Reference
A2	USC Services Allocation	65.11%	34.89%	100.00%	
I. Calculation of Pension Expense in Base Rates					
1	Pension Expense Allowed in the Test Year	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	2001 COSS
II. Calculation of PBOP Expense in Base Rates					
II.a FG&E PBOP Expense, net:					
2	FG&E PBOP Expense in the Test Year	<u>\$ 371,820</u>	<u>\$ 191,242</u>	<u>\$ 563,062</u>	2001 COSS
II.b Unitil Service PBOP Expense allocated to FG&E, net:					
3	2001 Unitil Service PBOP (SFAS 106) Expense per Actuary	n/a	n/a	\$ 39,869	Per General Ledger
4	2001 Unitil Service PBOP Expense paid to URT	n/a	n/a	59,100	Per General Ledger
5	Total Unitil Service 2001 PBOP Expense			<u>\$ 98,969</u>	L.3 + L.4
6	Unitil Service Charges to FG&E as a % of Total Charges	n/a	n/a	39.87%	2001 Test Year allocation = 39.87%
7	Total FG&E PBOP Expense, net	n/a	n/a	<u>\$ 39,459</u>	L.5 * L.6
8	Less: Amounts chargeable to capital	n/a	n/a	7,844	L.7 * 19.88%
9	Total Unitil Service PBOP Expense allocated to FG&E, net	<u>\$ 20,584</u>	<u>\$ 11,030</u>	<u>\$ 31,615</u>	L.7 - L.8; * A2
10	II.c Total FG&E PBOP Expense in the Test Year	<u>\$ 392,404</u>	<u>\$ 202,272</u>	<u>\$ 594,677</u>	L. 2 + L.9
III. Total PENSION/PBOP Expense in Base Rates:					
11	2001 FG&E Test Year Pension Expense	\$ -	\$ -	\$ -	L.1
12	2001 FG&E Test Year PBOP Expense	<u>392,404</u>	<u>202,272</u>	<u>594,677</u>	L.10
13	PENSION/PBOP Expense in Base Rates	\$ 392,404	\$ 202,272	\$ 594,677	L.11 + L.12
14	Less: Allocation to Electric Transmission	\$ 9,882	\$ -	\$ 9,882	L.13 (Electric) * 2001 COSS Labor Allocator
15	PENSION/PBOP Expense in Base Distribution Rates	<u>\$ 382,522</u>	<u>\$ 202,272</u>	<u>\$ 584,794</u>	L.13 - L.14

Fitchburg Gas and Electric Light Company
Pension/PBOP Expense
2003

Line No.	Description	Electric	Gas	Total	Reference
A1	Gas/Electric Allocation Factor - FG&E Payroll/Labor	58.43%	41.57%	100.00%	
A2	USC Services Allocation	65.11%	34.89%	100.00%	
I. Calculation of Pension Expense, net of amounts chargeable to capital					
I.a FG&E Pension Expense, net:					
1	2003 FG&E Pension Expense per Actuary	\$ 201,354	\$ 143,254	\$ 344,608	Per General Ledger = G/L
2	Less: Amounts chargeable to capital	82,898	58,977	141,875	L.1 * 41.17%
3	Total FG&E Pension Expense, net	<u>\$ 118,457</u>	<u>\$ 84,276</u>	<u>\$ 202,733</u>	L.1 - L.2
I.b Unutil Service Pension Expense allocated to FG&E, net:					
4	2003 Unutil Service Pension Expense per Actuary	\$ 123,503	\$ 66,181	\$ 189,684	Per G/L*43.51% Allocated to FG&E
5	Less: Amounts chargeable to capital	28,789	15,427	44,215	L.4 * 23.31%
6	Total Unutil Service Pension Expense allocated to FG&E, net	<u>\$ 94,715</u>	<u>\$ 50,754</u>	<u>\$ 145,469</u>	L.4 - L.5
7	Total 2003 FG&E Pension Expense	<u>\$ 213,171</u>	<u>\$ 135,030</u>	<u>\$ 348,202</u>	L.3 + L.6
II. Calculation of PBOP Expense, net of amounts chargeable to capital					
II.a FG&E PBOP Expense, net:					
8	2003 FG&E PBOP Expense	\$ 464,653	\$ 330,577	\$ 795,230	Per General Ledger
9	Less: Amounts chargeable to capital	191,298	136,099	327,396	L.8 * 41.17%
10	FG&E PBOP Expense, net	<u>\$ 273,355</u>	<u>\$ 194,479</u>	<u>\$ 467,834</u>	L.8 - L.9
II.b Unutil Service PBOP Expense allocated to FG&E, net:					
11	2003 Unutil Service PBOP Expense per Actuary	\$ 103,849	\$ 55,649	\$ 159,498	Per G/L*43.51% Allocated to FG&E
12	Less: Amounts chargeable to capital	24,207	12,972	37,179	L.11 * 23.31%
13	Unutil Service PBOP Expense Allocated to FG&E, net	<u>\$ 79,642</u>	<u>\$ 42,677</u>	<u>\$ 122,319</u>	L.11 - L.12
14	Total 2003 FG&E PBOP Expense:	<u>\$ 352,997</u>	<u>\$ 237,156</u>	<u>\$ 590,153</u>	L.10 + L.13
III. Total 2003 PENSION/PBOP Expense, net of amounts chargeable to capital and allocation to Electric Transmission					
15	Total 2003 FG&E Pension Expense	\$ 213,171	\$ 135,030	\$ 348,202	L.7
16	Total 2003 FG&E PBOP Expense	<u>352,997</u>	<u>237,156</u>	<u>590,153</u>	L.14
17	Total 2003 FG&E PENSION/PBOP EXPENSE	\$ 566,169	\$ 372,186	\$ 938,354	L.15 + L.16
18	Less: Allocation to Electric Transmission	14,258	-	14,258	L.17 (Electric) * 2001 COSS Labor Allocator
19	2003 FG&E PENSION/PBOP Expense (Distribution)	<u>\$ 551,910</u>	<u>\$ 372,186</u>	<u>\$ 924,096</u>	L.17 - L.18

Fitchburg Gas and Electric Light Company
Cost of Capital
D.T.E. 02 - 24/25

<u>Line No.</u>	<u>Description</u>	<u>Amount</u>	<u>Weight</u>	<u>Cost</u>	<u>Weighted Cost</u>	<u>Tax Multiplier (a) 38.03%</u>	<u>Tax- Effected Weighted</u>
1	Equity	\$ 36,694,782	40.82%	10.00%	4.08%	1.61	6.59%
2	Preferred	\$ 2,191,400	2.44%	6.81%	0.17%	1.61	0.27%
3	LTD	<u>\$ 51,000,000</u>	<u>56.74%</u>	7.49%	<u>4.25%</u>	1.00	<u>4.25%</u>
4	Total	<u>\$ 89,886,182</u>	<u>100.00%</u>		<u>8.50%</u>		<u>11.10%</u>

(a) Tax Multiplier = $1 / (1 - t)$, where: $t = [S_{tax} * (1 - Fed_{tax}) + Fed_{tax}]$, or $6.1\% * (1 - 34\%) + 34\% = 38.03\%$